

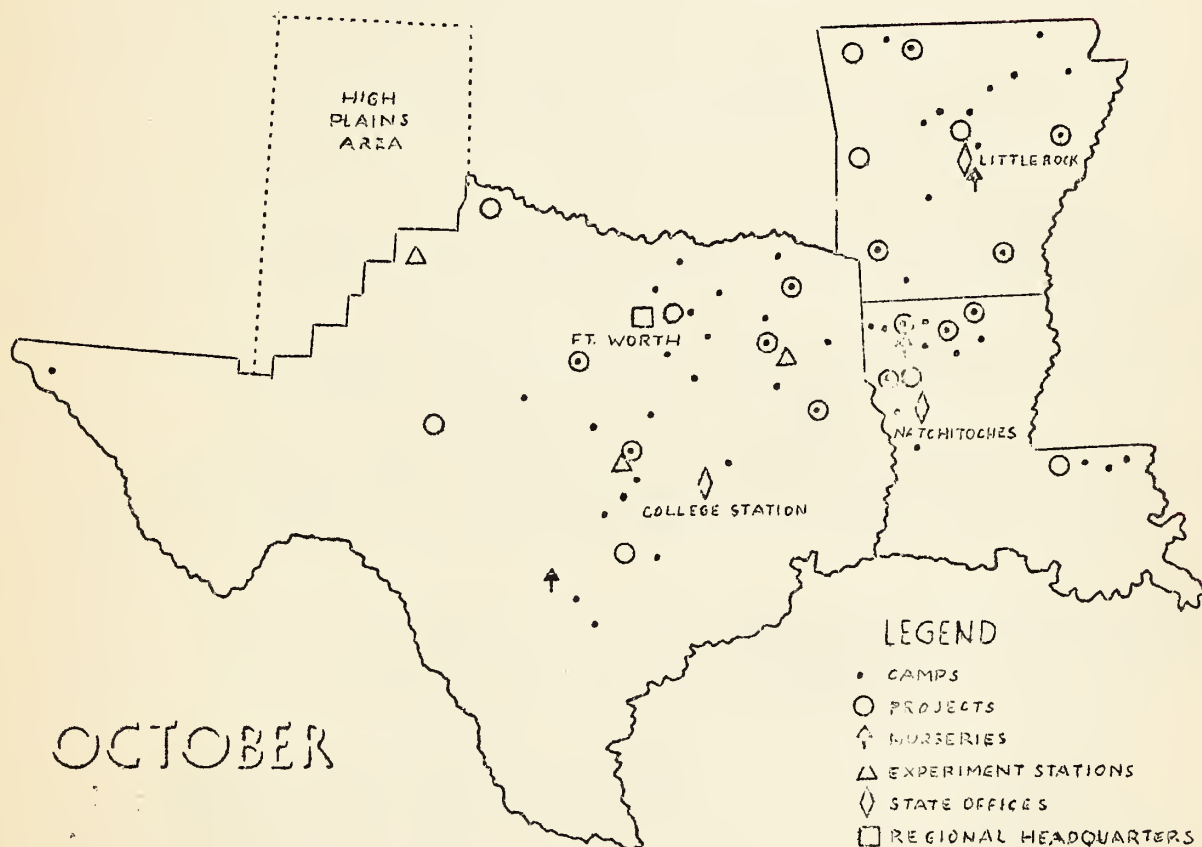
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# SOIL CONSERVATION SERVICE

## NEWS



## REGION 4

COMPRISING STATES OF LOUISIANA,  
ARKANSAS, AND TEXAS EXCEPT  
HIGH PLAINS AREA



# IS IT GOOD BUSINESS FOR A FARMER TO DEVOTE LAND TO THE PRODUCTION OF TIMBER CROPS?

By

H. C. Mitchell,  
Regional Forester.

There are many angles to be considered in answering this question. They can be answered only by a careful analysis of conditions on each farm. A single angle has been chosen here as a basis for taking evidence in order to avoid confusing complications.

The given premises are these:

1. A farm on average land in the upland cotton section of East Texas, North Louisiana, or Arkansas.
2. The farm is owner operated, no tenants at present.
3. The farm woodland is composed of loblolly pine and white oak in good growing condition. The site is average for both species.
4. The soils and slopes in the woodland are suitable for cotton production but the owner would have to add a tenant if he should use the land for that purpose.

Would it be more profitable for the owner to continue to produce the wood needed to operate his farm or to do away with the woodland, plant more cotton and buy the needed wood with the additional cotton money?

"Crops and Markets" for December, 1936, gives a detailed analysis of the cost of cotton production in this section in 1935. On an acre basis summary of that analysis is included in the following:

Average yield of lint	13 1/4 lbs.
Average price received by farmer	12.1¢
Value of lint	\$16.21
Added value of seed	\$3.70
Total value of cotton crop	\$19.91
Cost of production	\$18.30
Net return	\$1.61

How do the farmers make a living on that basis? The cost of production includes \$12.17 for labor which, added to the net return, yields the owner operator \$13.78 per acre of spendable money in case he hires no labor outside of his immediate family.

These figures bring out one very important point. Even with cotton, the only so-called cash crop, the farmer actually makes his living by selling labor through the medium of his crops. The owner operator sells his own labor, while the manager profits by employing and selling labor less



valuable than his own. At 1935 prices, the farmer received six cents more per hour for his woods work than for his cotton work.

To proceed with our analysis. Suppose our owner operator should employ a half-hand in order to plant more cotton. The owner would furnish everything except one-half the cost of ginning and the labor for which the tenant would get one-half of the crop. The acre value of the owner's half of the cotton crop would be:

Lint	\$8.11
Seed	\$1.85
Total value of crop	\$9.96
Cost of production	\$5.42
Net return to owner	\$4.54

The net return of \$4.54 per acre is the total of spendable money received from the crop in this case. Incidentally, the tenant receives only \$9.66 per acre for his labor under this arrangement instead of the allowed \$12.17.

In order to convert woodland to cotton land, the owner has the heavy initial expense of land clearing, fencing, and terracing. From the standpoint of permanence, he substitutes an erosion permitting crop, cotton, for woodland which gives the very best protection of all crops against soil erosion. Erosion would be especially hazardous in this case since the added cotton acreage would be tenant operated.

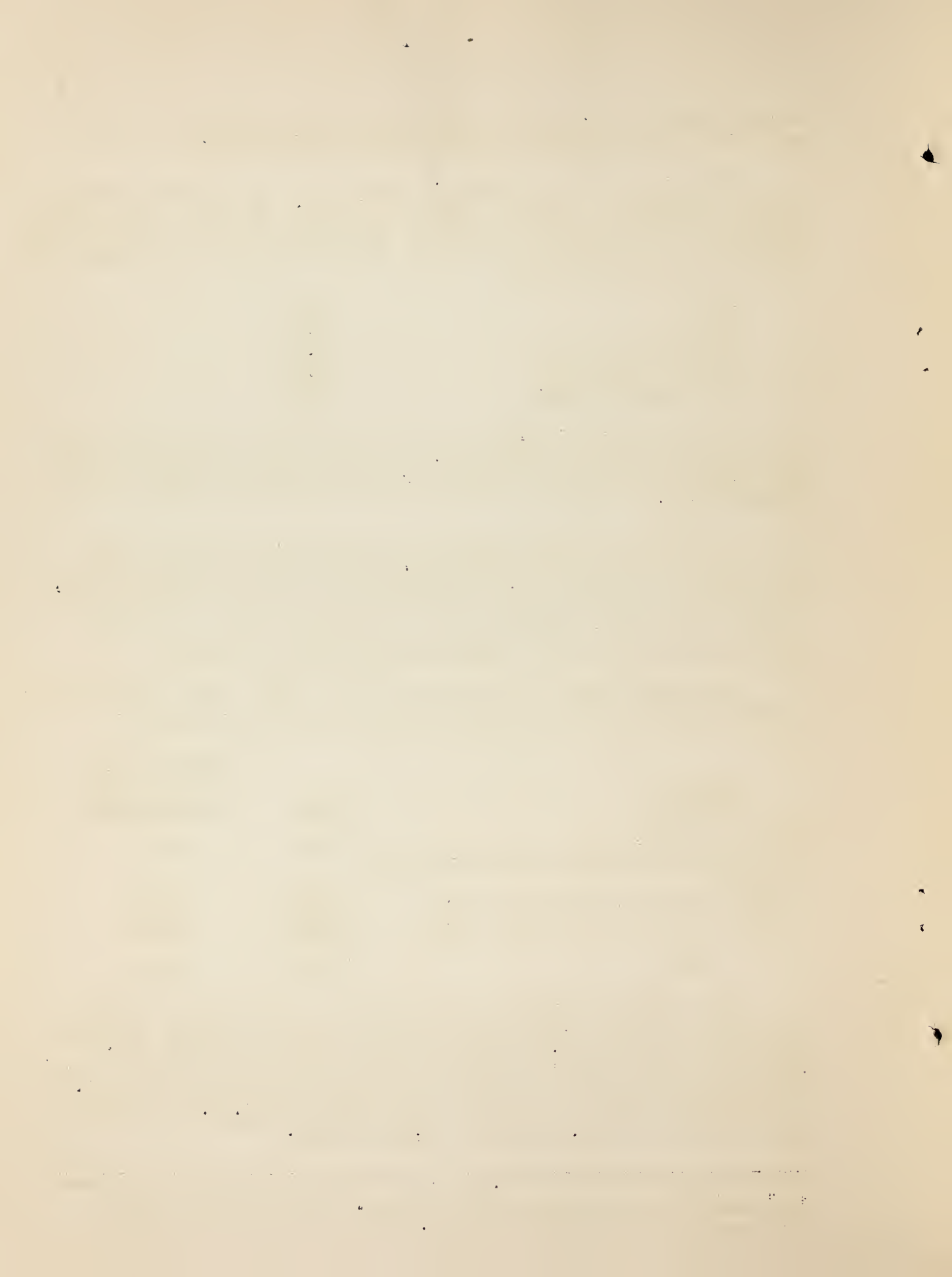
The average farm, in the section of the country under consideration, consumes approximately the following quantities of wood, annually:

<u>Products</u>	<u>Value</u>	<u>Equivalent In Standard Cords of Rough Wood</u>
220 fence posts*, @ 9¢	\$19.80	1.69
300 board feet of repair material @ \$25.00 per M	\$7.50	0.50
8 cords stove wood, 14" split @ \$5.00	\$40.00	8.00
4 cords heater wood, 16" split @ 3.50	\$14.00	4.00
Total	\$81.00	14.19

The experiment stations tell us that the average white oak site will produce per acre 0.55 cords annually and that the average loblolly pine site will produce 1.54 cords annually in fully stocked stands. Assuming that our farmer's woodland is average for both species, he would need 11.2 acres to supply his farm with needed wood, without a tenant. The 1935 retail value of products needed was about \$81.30, so the gross income value of the 11.2 acres was \$7.26 per acre.

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\* 4" split white oak posts lasting 5 years. Annual replacements 88 posts per mile for  $2\frac{1}{2}$  miles of fence.





Figuring net income, per acre, as for cotton, we have:

Gross income		\$7.26
Cost of production		
Protection - Taxes	\$0.18	
Milling and equipment	\$0.13	
Labor	\$5.82	
Total cost		<u>\$6.13</u>
Net acre income		\$0.83

Adding labor charges to net income, as before, the farmer gets the equivalent of \$6.65 of spendable money per acre from that part of his woodland needed to support the farm on a live-at-home basis. Woodland values such as acorn mast for hog food, the wildlife population, etc. are real enough but are not considered here for lack of accurate figures.

The farmer earns this \$6.65 per acre by saving the expenditure of cash cotton money. Since the owner's income from tenant operated cotton is only \$4.54 per acre, we conclude that this owner should continue his present setup, be satisfied with what cotton he can produce himself, keep his woodland and let the tenant seek elsewhere for employment.

It should be remembered that cotton was subsidized in 1935, and that the marketing of cotton is highly organized and thoroughly familiar to the farmer whereas he knows very little about marketing forest products at present. The relative value of forest products can be expected to increase as and when the farmer learns more about marketing.

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Other forestry and woodland management problems that will be discussed in future issues of the News Letter are:

1. What of the owner who has more than enough woodland to supply his own farm?
2. The place of woodland management in general farm management.
3. Why have farmers profited so little by woodland management in the past?
4. Any other problem the field personnel might suggest so long as it is of general interest and application. The project forester must analyze and work out individual problems.

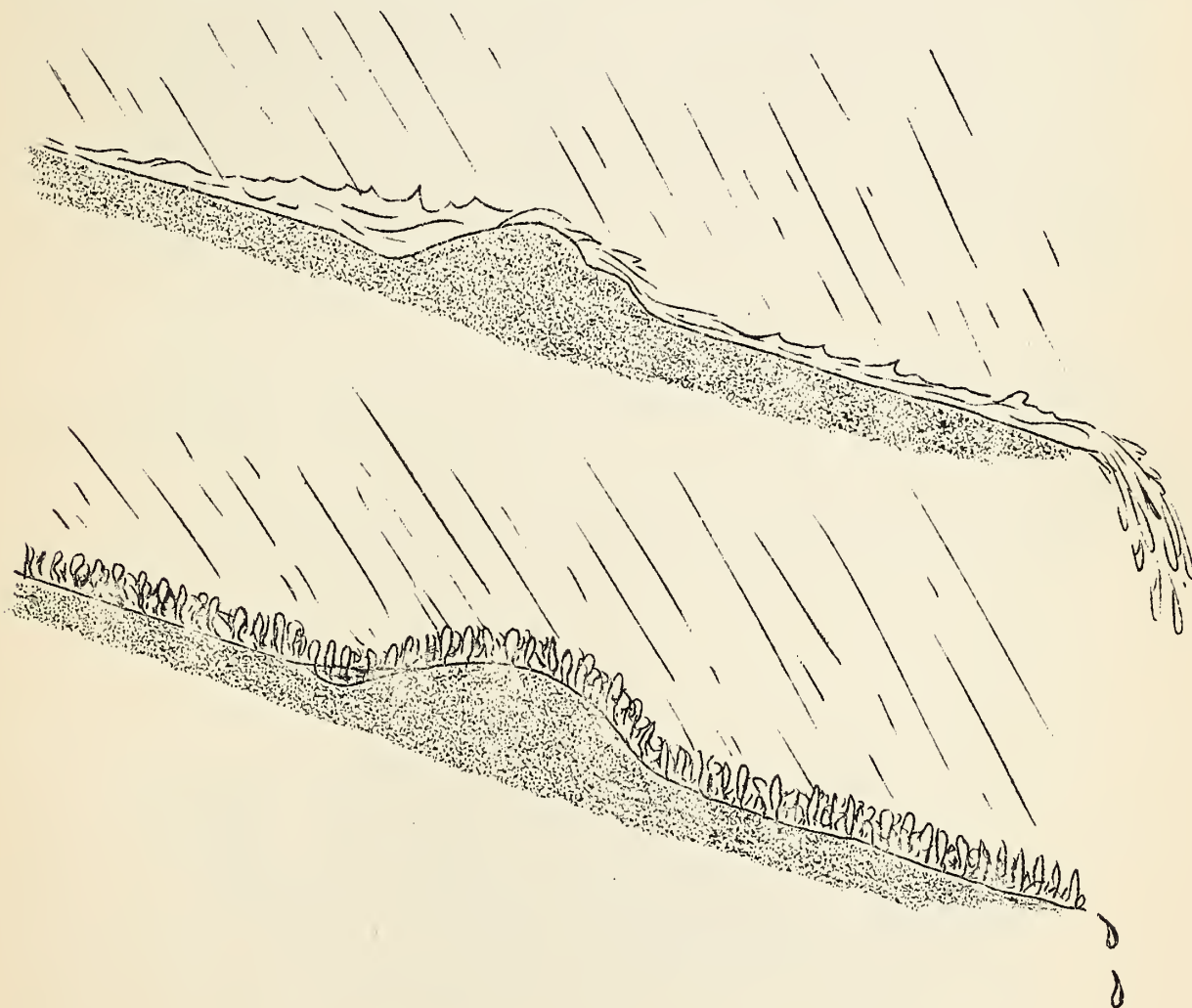


## WINTER COVER CROPS

By

E. A. Hodson  
Regional Agronomist

The low soil fertility and periods of intense rainfall make the use of winter cover crops an urgent and profitable practice within this region. A cover crop planted in the fall after other crops are harvested before the heavy seasonal rain begins will aid in the prevention of soil loss during the winter and early spring months. This factor alone should make the use of winter cover crops of vital importance in the Soil Conservation Service program.



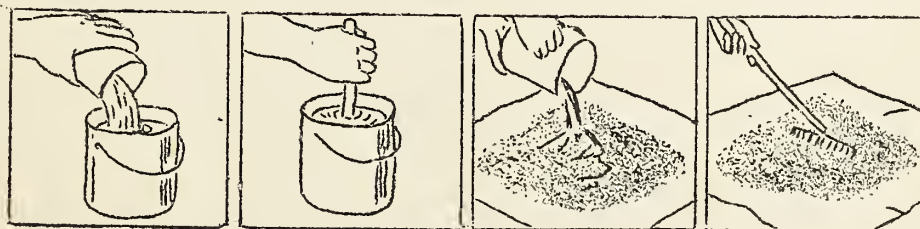
The value of dense vegetative cover afforded by cover crops has been proven by the Experiment Stations. This vegetative cover when turned under adds organic material to the soil giving it a higher water holding capacity. Experiment Station records show that 100 lbs. of sand will hold 25# water; 100# clay will hold 50# of water; and 100# of organic matter will hold 190# of water.





Cover crops aid greatly in the prevention of leaching. Growing crops take up plant food and hold it until they are turned under when the plant food again becomes available for other crops.

The crops to be used are many and will depend upon local adaptation. Oats, wheat, rye, barley, vetch, bur clover, Austrian winter peas are some of the crops which have proven successful in this region.



In planting winter cover the land should be prepared properly. When inoculation is necessary, fresh culture of a reliable brand should be used. Directions for inoculation are on the can and should be followed carefully. On land of low fertility it is often profitable to use from 200 - 400# of superphosphate per acre.







In many instances the increased yield of crops following winter cover crops has more than paid for the cost of seed, inoculation, and fertilizer the first year. The effect on the following two or three years should be clear gain.

Too much emphasis can not be placed upon the importance of the use of winter cover crops in the soil conservation program.

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#### NATURAL VEGETATION GIVES PROTECTION TO FIVE COVIES OF QUAIL

The following story taken from the September issue of the Texas Extension Service Farm News brings out how vegetative phases of the coordinated erosion control program is of definite value in the Conservation and increase of wildlife species, according to Homer Towns, regional biologist.

"I have raised five covies of quail this year on my 53 acre farm," says Ira L. Carroll, Trinity county farmer and sportsman. "A 20 acre tract including five acres of wooded land, berry vines planted along the fence rows, and a tank of water provides cover for two covies.

"Natural vegetation at the ends and sides of an orchard with a vine cover down to a tank of water provides cover for another covey. I have a 15 acre terraced orchard. I allow the main terraces to lay out, thus giving a permanent terrace and a natural run from water to cover down the terrace to a heavy wooded section on the southwest and to a plum thicket on the southeast. This takes care of the other two covies."





### BORDER STRIPS

A soil conservation program is not complete until all areas susceptible to erosion are protected. In the cultivated fields some areas are not protected by contour tillage, strip cropping and terracing. Several cooperators have observed these areas on their farms and are now protecting them with border strips.

Border strips of close growing, fibrous-rooted crops planted along field boundaries, terrace outlet channels, roadside ditches, field roads and at the end of rows prevent soil losses by checking the flow of water from the cultivated fields. In addition to erosion control, border strips connect all of the strips in the field, making the harvesting of crops easier. They are also effective in controlling the growth and spread of undesirable weeds and grasses.

The width of these strips varies according to the drainage area, but should not be less than 12'. Small grain, sorghum, sudan and alfalfa have been planted on border strips with good results.

Permanent border strips of adapted meadow grass would be the most effective crop for the purpose.

- - Project Tex-5,  
Garland, Texas.

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### GOOD HUBAM YIELDS

Approximately 10,000 pounds of Hubam Clover seed have been harvested and threshed this season by cooperators in the Duck Creek Project area. The yield has varied from 200 to 500 pounds of seed per acre. Several cooperators harvested as much as one ton of hay per acre in addition to their seed.

- - Project Tex-5,  
Garland, Texas.

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### WILDLIFE PLANNING IMPORTANT

We look for game in areas where suitable food and cover for these birds and animals are to be found in most abundant quantities.

It is reasonable to expect that the farmer who plans his ordinary crops with an eye toward benefitting his wild life friends, will find them making their homes with him in larger numbers than in places where they are not considered.

- - Project Tex-9,  
Mt. Pleasant, Texas.



### COOPERATOR LIKES COVER CROPS

Forty bales on forty acres is Mr. Milos McKee's estimated yield of cotton from a field on the north side of his farm near Keithville, Louisiana. The cotton in this field was planted during the first week of June. The plants are shoulder high and well loaded with bolls.

This field of cotton offers quite a contrast to the cotton fields on adjoining farms. The cotton on those farms is less than knee high and will require from three to five acres to produce a bale.

"This splendid yield of cotton," Mr. McKee states, "is largely due to the fact that a crop of bur clover has been turned under in this field each spring for the past four years and also the fact that the cover crop protected the field from erosion.

"Only a few years ago this field was abandoned as worthless and allowed to remain idle because it had ceased to produce profitable crops. In order to use the land I began planting bur clover as a winter cover crop, and the cotton and corn yields have steadily improved each year.

"By allowing the bur clover to mature seed occasionally before turning under I have not found it necessary to resod this field. The stand of bur clover becomes denser and grows more luxuriant each year.

"Forty head of cows and mules grazed on this field during the past winter, and a heavy growth was turned under for green manure after the seed began ripening in May. A thick volunteer stand of bur clover is appearing among the cotton stalks, and there should be a good cover on this land this fall and winter."

About two years ago Mr. McKee, with the assistance of the Soil Conservation Service, terraced this field. He has planted a twelve foot strip of sorghum and peas above each terrace. This strip crop is not only protecting the terrace channel, but is also furnishing him an abundance of valuable food to be used this winter.

By the use of bur clover as a winter cover crop and strip crops and terraces soil is saved and a former piece of waste land has been converted into one of the most fertile fields in this area.

- - Project Ia-2,  
Mansfield, Louisiana.

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### ENROLLEES GET JOBS

John Krueger has left the camp to accept a position. So has Arthur Cox, who accepted a position in Austin.

- - "Tide of 3805"  
Bartlett (Tox) Camp.



## VALUE OF PASTURE SEED MULTIPLICATION PLOTS

Pasture seed multiplication plots are valuable for several reasons. The primary aim of these plots, as the name implies, is to grow grass and clover seed for spreading over the rest of the pasture. The plot should be cut when the seeds are ripe and the hay scattered over the pasture. The seed need not be threshed as they will be tramped in the ground with the hay by stock, or beaten in by rain.

A good pasture should furnish grazing, as nearly as possible, the year round; for this reason we plant a mixture of seed in the seed multiplication plot. Some of the seeds are for winter grasses, and clover, and some are for summer grasses. Some of the winter pasture plots are Bur clover, Black medic, Melilotus indica (yellow sweet clover), Italian Rye grass and rescue grass. The summer grasses are Bermuda, or Buffalo grass, which are the best grasses for pastures in the area, Dallis grass and Rhodes grass.

The pasture seed multiplication plot furnishes a place to try out new and untried pasture grasses. If any of these new grasses show promise they may be multiplied from the plot and scattered over the pasture. This plot can be used in much the same way as a cotton breeder uses his breeding plots.

Pasture seed multiplication plots should be plowed early in the Fall so the ground can settle before the seeds are planted. If the plot gets woody before seed is planted it should be disked or harrowed to kill the weeds.

The seed should be planted in October by broadcasting and covering with a harrow, or drilled in with a small grain drill.

- - Project Tex-4,  
Lockhart, Texas.

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## RAIN AND GRASSLAND

Grass growth on pasture land is not determined by the amount of rain that falls. The Soil Conservation Service says rather it depends on the amount of rainwater that's held on the land. And holding water on the land where it falls is also a sure way of checking soil losses.

Contour ridges and furrows are proving effective in storing rain-drops on grassland. Thousands of farmers who have tried these moisture-holding structures report favorable results. They say that ridges constructed 15 to 30 feet apart or furrows built 10 to 20 feet apart hold most all the rain that falls and greatly increase the yields of grass.

By holding moisture that falls in wet periods so it can be used by grasses when rain is scarce, contour furrows and ridges perform an important task. They're also helpful in anchoring soil on hillsides where grass stands have been thinned by drought or overgrazing, and they keep livestock droppings on pasture, thereby helping to maintain soil fertility.

- - Project Ark-5,  
Hope, Arkansas.





### EROSION CONTROL AND WILDLIFE REQUIREMENTS

If the environment for wildlife is to be improved in doing erosion control work, something must be known about the requirements for wildlife.

The wildlife requirements might be listed as:

1. Cover requirements.
2. Food requirements.
3. Water requirements.
4. Protective requirements.

Cover requirements might be divided into several different types. Cover or protected areas are essential if wildlife is to be present in reasonable numbers.

Nesting cover, which furnishes homes and breeding places for wildlife may be tall growing grasses for the ground nesting species, low growing trees and shrubs for some species and hollow trees and snags for other species.

Concealment cover or places to escape from enemies varies with different species. Tall growing grass, close growing shrubbery, vines, briars, brush piles, hollow logs, stumps and trees serve as escape cover for a number of species of Wildlife.

Protective cover or places that serve as protection against weather conditions such as rain, snow, wind, and hot sun. In winter, evergreen plants such as privet, yaupon, red cedar and others furnish the desired cover. In summer such plants as grape vines, virginia creeper, saw briar, kudzu, and other thickly foliated trees, shrubs and vines furnish protective covering.

Cover lanes or a band of permanent vegetation, reaching from one wooded area to another or maybe just along the border of a field. Such strips should be from four to eight foot wide and located along fences. This type of cover can usually be maintained without reducing the amount of land in cultivation or pasture. The purpose of this type of cover is to increase the range and make more food plants available to the wildlife species.

In planning the erosion control program on a farm, some consideration should be given to these cover requirements for wildlife. Cover conditions can be improved by interplanting in new forest areas, by retiring small eroded areas to wildlife plantings by underplanting in existing woodlands, by gully plantings and by fence row plantings.

- - Project La-1,  
Mindon, Louisiana.

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REMIND COOPERATORS TO IMPROVE WOODLANDS  
WHEN CUTTING FUELWOOD

The selective removal of the winter's supply of fuelwood offers an excellent opportunity for improving the small farm woodlot. The average woods on the Ridge contains a large per cent of scrub materials which can be used only for wood. In the past it has been the custom to use the best trees because they split easily. This practice has increased the amount of undesirable material and decreased the amount of desirable material. One good rule always to follow is: "Never cut a better tree than is needed for the use at hand."

The woodland management plan in the agreement should be followed in all cutting. Before starting to cut, the "crop" trees should be selected. These consist of the better formed trees of the desirable species. They should be spaced ten to twenty feet apart. Care should be exercised in selecting the crop trees as the future of the woods depends on this selection. After the crop trees have been selected all trees which interfere with their growth should be removed. Remember that a poor tree is better protection to the soil than no tree at all. Crop trees may be of any age or size.

- - Project 11-2,  
Forrest City, Arkansas.

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A TIP- DON'T LET THE POCKET GOPHER GET IN YOUR "MONEY POCKET"!

The Pocket Gopher, often known as the Salamander, gets its name from his pouches or pockets located on each side of his jaws. How this rat-like Rodent gets its name is NOT important, but the damage that he may do to terraces and dams is of vital importance to ALL interested in a Soil Conservation Program. He is also destructive and undesirable to have in pastures and in Meadowland.

Gophers may either be controlled by poisoning or by trapping. A good effective and economical means of control can be accomplished by poisoning, which should be done between the Months of October and February while most vegetation is in a dormant stage and there is a scarcity of food supply.

The method of poisoning is simple to carry out and your Contact Man will be glad to explain it to you if you have not already had experience in poisoning Gophers.

- - Project Tox-7,  
Macogdoches, Texas.

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IMPRESSES COOPERATORS WITH FACT THAT CONSERVATION  
WORK IS NEVER FINISHED

All erosion control devices, either vegetative or mechanical, require maintenance year after year, and season after season if they continue to be effective as soil and water conservation measures. Erosion Control Work Is Never Finished.

After a farm has a complete program of soil and water conservation established on every acre, the farmer is then ready to start taking care of his farm. Each annual crop rotation may be improved on with soil building crops and cover crops; each set of rows laid off on the contour conserves more moisture and help prevent erosion; each strip of thickly planted and fibrous rooted feed or grain crop that is planted on the contour conserves more soil and water for the succeeding crops and each farming operation, either on pasture land or crop land, may help to conserve soil and water if it is done correctly.

Terraces, structures or any other mechanical means of erosion control are generally very short lived unless they receive careful maintenance and attention. If terraces are not properly maintained, they may cause more damage to a field than if no terraces had been built.

Controlled grazing of pasture lands cultivating bermuda sod, scattering sod in gullies and on poorly covered pasture lands, repairing and rebuilding contour ridges, constructing contour furrows between old contour ridges, building new tanks and repairing old tank dams and tank spillways, seeding improved grasses and clovers during winter and spring season, manuring worn out land retired to pasture, and other jobs in pasture development need attention each year and season if a permanent job of soil and water conservation is accomplished.

Yet if maintenance work is done as needed, very little work is required in properly maintaining each erosion control measure on a farm. Many maintenance jobs are done in regular farm operations. Terraces are easy to maintain by proper plowing operations, as explained in another article in this news letter; strip crop preparation and laying off contour rows are a part of regular farm work and most jobs of repairing sodded waterways or outlets as developing permanent pastures are done in a comparatively short time or during seasons when other farm work is not rushing.

- - Project Tex-8,  
Dublin, Texas.

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SPREAD OF PRACTICES

After seeing the value of soil-saving practices, such as strip crops, cover crops, meadow strips, etc., established on cooperators' farms by the Soil Conservation Service, Mr. Horace Jennings decided they would work on his farm. Mr. Jennings is a young farmer who lives just outside the Monticello Ridge Project Area. He has been making a close study of soil-conserving practices on cooperators' farms. This spring (1937) he ran lines and established strip crops on his own farm.



Last fall Mr. Jennings sowed two and one-half acres to hairy vetch on land that had been planted to truck, tomatoes, and corn. The vetch was turned under in late spring and the field planted to corn. Mr. Jennings, who is the conservative type and talks little, states that the normal yield on the two and one-half-acre tract is twenty-five bushels per acre. He estimates that he will harvest forty bushels per acre this year.

When asked how he accounted for the increased yield, he said, "Vetch, aided by rain, is the only reason I know."

He plans to sow three times as much vetch this fall, and to plant winter strips of oats, because he finds that soil-conservation measures pay.

- - Project Ark-4,  
Monticello, Arkansas.

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#### FARMER BUILT TERRACES IN JONESBORO CAMP AREA

Some of the best terraces ever built in the Jonesboro Area were built by Jesse T. McBride, a cooperator with the Soil Conservation Service, according to Mr. W. P. Foy, Camp Engineer. This farmer used a Kelly plow, team and drag and constructed his terraces at an average cost of approximately \$30.00 per mile.

Mr. McBride's method is as follows:

"I use a Kelly plow, team and drag and plow narrow furrows and drag until I get the proper height. Next I gradually build up until I have the necessary width. It isn't much trouble if you get the height first."

Mr. McBride used four mules in doing this job, but instead of hitching them all abreast as is commonly the practice, he fastens a tongue to the plow and drag with a heavy clevis. The lead team is then hooked on exactly as in a four-up log team.

"In this way, I do not have any mules walking on the fresh plowed terraces," said Mr. McBride. "The tongue also pivots and allows shorter turning."

Farmer-built terraces similar to those constructed by this cooperator can be built by any of the farmers in this section, states Mr. Foy. The main hindrance in the past has been the lack of proper equipment, but any farmer has the necessary equipment to follow the instructions above. Terrace dimensions that come up to the Soil Conservation Service specifications are: Effective height - 16 to 18 inches; Width - 20 feet.

- - Project La-1,  
Ruston, Louisiana.







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SOIL CONSERVATION SERVICE  
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